

A WIDE FREQUENCY RANGE DLL WITH DYNAMICALLY DETERMINED VCDL/VCO OPERATIONAL STATES

ABSTRACT OF THE INVENTION

5 In one embodiment of the present invention, a phase generator,
comprising a plurality of delay blocks, is coupled in a feedback loop with a phase
detector. When in an open loop mode, the phase generator is operable as a
voltage controlled delay line. The phase detector compares an input signal with
a first output signal of the phase generator and generates a first control signal
10 based thereon. The phase generator is also coupled in a feedback loop with a
phase-frequency detector. When in a closed loop mode, the phase generator is
operable as a voltage controlled oscillator and the phase-frequency detector
compares the input signal with a second output signal of the phase generator.
The phase-frequency detector then generates a second control signal based
15 thereon.